

"APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515420020-2

GLUJSHKOV, V.

"New Type of Forge in the Machine Shop." Tr. from the Russian, p. 515, Praha, Vol. 3, no. 7, July 1953.

SO: East European Accessions List, Vol. 3, No. 9, September 1954, Lib. of Congress

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CIA-RDP86-00513R000515420020-2"

GLUSHKOV, V.N., inzhener

Selection of heat energy carriers for the preheating of parts  
manufactured in forging and stamping plants. Vest.mash.35  
no.7:61-66 J1'55. (MLRA 8:10)  
(Steel forgings) (Sheet-metal work)

GLUSHKOV, V.N., inzh.

Selecting methods for annealing billets in forging and stamping  
shops. Vest. mash. 38 no.1:56-62 Ja '58. (MIRA 11:1)  
(Furnaces--Heat treating) (Forging)

GLUSHKOV, V.N.

Problems of the seven-year plan; main trends in the development of forging and stamping shops at tractor plants. Mauch.  
dokl.vys.shkoly; mash.i prib. no.4:22-26 '58.

(MIR 12:5)

(Tractors--Design and construction)  
(Sheet-metal work)

GLUSHKOV, V.N.

<p><b>PLATE I BOOK INFORMATION</b></p> <p>80/1986</p> <p>PS-1) "Tekhnologicheskij spravochnik po kortej i obzorym stenamontse (Handbook on Open and Closed Die Forging)" Moscow, 1979. 968 p. 15,000 copies printed.</p> <p>Ed. (title page): N.V. Storobets, Ed. (inside book): S.B. Krasnov, Engel'ser, Ed. of Publishing house: A.M. Olsuf'ev, Engelsev, Tech. Ed.: V.P. Soloviev, Kudravtsev, Ed. for Information literature [Mashgiz]: V.I. Krylov, Engelsev.</p> <p>purpose: The handbook is intended for engineers and technicians working in forging and die forging shops and as a curriculum for technical schools.</p> <p>content: The handbook contains information on processes of forging metals concerned with information on various kinds of forging and practices used during forging and heat treatment. It also gives data on quality inspection of forgings and mechanical properties of forged parts. The handbook also describes characteristics of basic methods of metalworking, such as casting and on technical-economical indicators of manufacture by forging and casting equipment, on the methods of calculating and specifying standards for parts, the authors state that problems of manufacture by forging and casting equipment are not fully being discussed up to now in textbooks and special treatises. The authors believe that the main problem in the manufacture of forged parts is the lack of standardization of the manufacturing process, which is not fully covered in the handbook. The present handbook attempts to give some general information about the manufacture of forged parts.</p>	<p><b>Overhead categories</b></p> <p>a. II. Technical and economical indices and fundamentals of forging 912 Standardization (V.A. Glushkov and V.Y. Kurnikov, 912 Technical and economical indices (V.A. Glushkov and V.Y. Kurnikov, 912 Basis of engineering standardization (V.Y. Kurnikov, 912 Principles of standardization of forged parts 912 Principles of standardization of forged parts 912 Standardization of basis for forging processes 912 Standardization of basis for forging processes 912 Standardization of basis for forging operations 912 Standardization of open die forging operations in small lots and single piece production 912 a. III. Cold Closed Die Forging and Services 912 Code 22/22</p>
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GLUSHKOV, V. N.; BOGDAN, A.D.

Indices of the technical standard of operations in forging shops.  
Kuz.-shtam.proizv. 1 no.5:37-41 My '59. (MIR. 12:10)  
(Forging)

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CIA-RDP86-00513R000515420020-2"

GLUSHKOV, V.N.

Selecting the energy carrier for continuous heating of metals.  
Nauch. dokl. vys. shkoly; mash. i prib. no.2:111-158 '59.  
(Furnaces, Heating)  
(VIRA 12:12)

GLUSHKOV, V.N.

Technological conference on the economy of ferrous and nonferrous  
metals and of electric power. Kuz'chtaia protiv. 2 no. 8;3 of cover  
Ag '60.  
(Metalwork--Congresses)

GLUSHKOV, V.N.

Selecting a power carrier for the heating of blanks in a forge.  
Kuz.-shtam. proizv. 3 no.3:33-35 Mr '61. (MIRA 14:6)

(Forge shops--Equipment and supplies)  
(Lithium)

GLUSHKOV, V.N., inzh.

Some problems in the reorganization of forge and stamping shops.  
Vest.mash. 41 no.7:58-62 Jl '61. (MIRA 14:6)  
(Forge shops---Technological innovations)

GLUSHKOV, V.N.; BOYCHENKO, A.N.

High energy machines. Kuz.-shtam. proizv. 5 no.2123-27 F 163.  
(MIRA 1612)  
(United States--Forging machinery)

GLUSHKOV, V.E.

Scientific-technological conference "Progressive methods of metal heating, heat treating and die casting; and the development of heat treatment equipment." Moscow, 1982. 16 pp.

1.1.6.4.1.2.1.1.

U.S. Communist foreign agents for clandestine in the  
United States and West Germany. Main, technical, inform.  
Communist Int. Inst., names & tech. inform. 27 n.s.  
Report 1968.

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RECORDED IN, W.M.C. Form.

The second scientific technical conference on neutrino, Inst.  
math. mat. 45 no.4(?) Apr 1965. (V.I. P.P.)

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CIA-RDP86-00513R000515420020-2"

GLUSHKOV, V.M.

Second scientific and technical conference on metal heating.

Kuz.-chtam.proizv. 7 no.47 P '65.

(MIRA 18:4)

MANUKYAN, A.A.; GLUSHKOV, V.P.; SHVEDKOVA, V.M.; SVIRIDOVA, Z.P.; CHEBOTAREVA, Ye.A.; SHUMILIN, V.I.; PUDINA, K.V.; BRAGINA, N.N.; LUTSKAYA, Ye.Ye.; KODACHENKO, A.S.; KOSOVA, V.A.; MOKLYARSKIY, B.I.; GRECHIKHIN, A.A.; KULIKOV, N.I.; RYDVANOV, N.F.; BEL'CHUK, A.I.; VINTSER, Yu.I.; ROZENTAL', Ye.I.; BELOUS, T.Ya.; SIDOROV, V.F.; ZHDANOVA, L.P.; ALEKSANDROVSKAYA, L.I.; KOVAL', V.V.; KHAVINSON, Ya.S., glavnnyy red.; SOKOLOV, I.A., zam.glavnogo red.: ALEKSEYEV, A.M., red.; ARZUMANIAN, A.A., red.; BELYAKOV, A.S., red.; BENCHIN, A.I., red.; VARGA, Ye.S., red.; LEMIN, I.M., red.; LYUBIMOVA, V.V., red.; SKOROV, G.Ye., red. V redaktsirovanií uchastvovali: SHAPIRO, A.I., red.; TATISHCHEV, S.I.. KOVRIGINA, Ye., tekhn.red.

[Economic conditions of capitalistic countries; review of business conditions for 1958 and the beginning of 1959] Ekonomicheskoe polozhenie kapitalisticheskikh stran; konfunktturnyi obzor za 1958 g. i nachalo 1959 g. Moskva, Izd. "o "Pravda," 1959. 127 p. (Prilozhenie k zhurnalu "Mirovaya ekonomika i mezhunarodnye otnosheniya," no.8, avgust 1959 g.) (MIRA 12:9)

1. Akademiya nauk SSSR. Institut mirovoy ekonomiki i mezhunarodnykh otnosheniy. 2. Kollektiv sotrudnikov konfunktturnego sektora Instituta mirovoy ekonomiki i mezhunarodnykh otnosheniy AN SSSR (for Glushkov, Shvedkova, Sviridova, Chebotareva, Shumilin, Pudina, Bragina, Lutskaya, Kodachenko, Kosova, Moklyarskiy, Grechikhin, Kulikov, Rydvanov, Bel'chuk, Vintser, Rozental', Belous, Sidorov, Zhdanova, Aleksandrovskaya, Koval'). (Economic conditions)

GLUSHKOV, V.P., kand. ekon. nauk; POKROVSKIY, A.I., kand. ekon. nauk; VEHER,  
A.B., kand. istor. nauk; VASIL'KOV, N.P., kand. ekon. nauk; ARDAYEV,  
G.B., kand. ekon. nauk; TIKASHKOVA, O.K., kand. ekon. nauk; KHTEL'-  
NITSKAYA, Ye.L., doktor ekon. nauk, otv. red.; PANTELEYEV, V.I., red.  
izd-va; RYLINA, Yu.V., tekhn. red.

[Government ownership in Western Europe] Gosudarstvennaya sobstven-  
nost' v stranakh Zapadnoi Evropy. Moskva, Izd-vo Akad. nauk SSSR,  
1961. 463 p. (MIRA 14:11)

1. Akademiya nauk SSSR Institut mirovoy ekonomiki i mezhdunarodnykh  
otnosheniy. 2. Sektor stran Zapadnoy Evropy Instituta mirovoy eko-  
nomiki i mezhdunarodnykh otnosheniy AN SSSR (for all except Panteleyev,  
Rylina).

(Europe, Western--Government ownership)

KILESSO, A.I.; FARAMAZYAN, R.A.; KONONYUK, B.Z.; MARTINSEN, Z.A.;  
ANDREYEV, Yu.V.; SLAVIN, S.V.; RUSETSKIY, S.B.; GLUSHKOV,  
V.P., otv. red.; PLISKINA, Ye.M., red.; TIKHOMIROVA, S.G.,  
tekhn. red.

[The shipbuilding industry of capitalist countries] Sudostroitel'naia promyshlennost' kapitalisticheskikh stran.  
Moskva, Izd-vo AN SSSR, 1963. 471 p. (MRA 16:10)

I. Akademiya nauk SSSR. Institut mirovoy ekonomiki i mezhdunarodnykh otnosheniy.

(Shipbuilding)

AVERIN, Yu.A., inzh.; GLU'SHKOV, Ye.F., inzh.; KARYAKIN, N.N., inzh.

Investigating the power factor of a.c. electric traction systems  
used in rectifier electric locomotives. Trudy TSNII MPS no.156:33-48  
'68. (MIRA 11:8)

(Electric locomotives) (Mercury-arc rectifiers)

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REBRIK, B.N., kand.tekhn.nauk; GLUSHKOV, Ye.F., inzh.

New II60 a.c. locomotives. Vest.TSMII MPS 18 no.8:15-21 D  
'59.  
(Electric locomotives)

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CIA-RDP86-00513R000515420020-2"

TIKHMENEV, B.N., doktor tekhn.nauk; REBRIK, B.N., kand.tekhn.nauk; GLUSHKOV,  
Ye.F., inzh.

Ways of improving the N60 diesel locomotive. Vest.TSMII MPS 20 no.3:  
3-9 '61. (MIRA 14:5)  
(Diesel locomotives)

GIP Ltd., New Delhi, India.

ources from current pulsation and the economic advantages of  
smooth reactors. West, TSMIT MPG 24 no.1:9-12 '65.

(MIRA 18:6)

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CIA-RDP86-00513R000515420020-2

GLASHEK, N., Y., 1950.

Parameters of rectified current circuits on VL63 and VL80-005  
electric locomotives, Trudy ISWII MTS no. 286183-92 165.

(MERA 18:8)

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CIA-RDP86-00513R000515420020-2

REBRIK, B.N., kand.tekhn.nauk; GLUSHKOV, Ye.F., inzh,

Studying the performance of the ignitrons of a.c. electric locomotives.  
Trudy TONII MPS no.286.131-139 '65.

(MIRA 18:3)

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CIA-RDP86-00513R000515420020-2"

21/1000  
44-00101/001/005/010  
B602/1

AUTHORS: Ponomarev-Stepnev, N. N. Andreev, Yu. S.

TITLE: Some problems of the physical design of reactors

PERIODICAL: Atomnaya energiya, v. 11, n. 1, Jan., 1961, p. 25

TEXT: The physical design of a reactor consists in the solution of the following theoretical problem: To derive a given distribution law for the specific heat loss by spatial arrangement of the materials in the reactor. Some methods are discussed for treating the problem mathematically. There are two cases to be considered, depending on the construction of the core: 1) reactors for which the heat-removing surface per unit volume of the core remains constant in the design of the core, and 2) reactors for which the heat-removing surface per unit mass is constant. The first case is treated first. The law of the heat escape distribution (per unit volume of the core) is given. The following calculation is made along general lines: Calculation of a "natural" solution of the problem. One obtains

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S/OS/2/62/211/001/003/010  
B102/2/2/2

Some methods of ...

$$\left. \begin{aligned} D\nabla^2 u + \frac{\partial u}{\partial t} &= S_\alpha(r) \chi(u), \\ D(\nabla u v_{n+1} - \sum_{j=1}^m u v_{n+j}) - \sum_{j=1}^m u v_{n+j} &= f(v_m, u) \\ S_\alpha(r) &= \nabla^2 \sum_{j=1}^m u v_{n+j}(r). \end{aligned} \right\} \quad (3)$$

its solution according to formula (1) is given by (2).

$$Q_\alpha(r) = \frac{S_\alpha(r)}{\sum_{j=1}^m u v_{n+j}(r) v_{n+j}'},$$

$$u v_{n+1}(r) = \sum_{n=1}^m B_n v_n(r);$$

$$B_n = A_n \frac{\int_{u_{n+1}}^{u_{n+1}-\alpha_n^2} \chi(u') e^{-\frac{1}{2} \sum_{j=1}^m u_j^2} du' - \frac{1}{v_n}}{\Sigma_{i,j}^m (1 + u_i L_{ij}^T Q)},$$

Card 2/7

Some methods of ...

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where  $\psi_n^2$  is initial thermal envelope of the profile.

$$\begin{aligned} \nabla^2 \psi_n(r) &= -\sigma_n^2 \psi_n(r), \\ \psi_n(R_0) &= 0 \end{aligned} \quad (A)$$

$A_n$  are the Fourier coefficients of the approximation of the density of fission-neutron sources, namely,

$$N_n(r) = \rho_n(r) J(r), \quad (1)$$

$$J(r) := \int_{-m}^{m} v_n \sigma_{ns}(n) n \psi(r, n) dn + v_n^m \sigma_{ns}^m n \psi_m \quad (2)$$

$J(\frac{r}{r})$  being the fission integral for a fission nucleus. The problem (in image approximation) has no analytical solution for a reactor with reflector which differs in its properties from the moderator in the core. Calculation of a thermal reactor is done by the successive approximation. The solution of the matrix equation (1) is for the second approximation in the core Card 5/7

X

S/CCP/SC/111/CC1/003/010  
31.1.7.254

Some methods of ...

$$\rho_0(r) = \frac{S_0(\theta)}{\sqrt{\pi} \rho_{\text{fiss}}(r) v_{\text{fiss}}^2}. \quad (13)$$

This equation represents the criticality condition for the reactor. Calculation of intermediate reactors. The neutron - physical problem is not analytically solvable ... this is why recourse must be had to numerical methods. One possibility, for example, is the method of successive approximations with respect to the concentration of the fissile material. In zeroth approximation,  $\psi_0^0(\theta) = S_0(\theta)/v_{\text{fiss}}^2(\theta)$ , where  $v_{\text{fiss}}^2(\theta)$  is calculated according to formula (2). With this value and the known  $S_0(\theta)$  one has  $\psi_1^0(\theta)$ .

$= S_0(\theta)/v_{\text{fiss}}^1(\theta)$ , and so on, till the ratio  $S_0(\theta)/v_{\text{fiss}}^p(\theta)/v_{\text{fiss}}^{p+1}(\theta)$  in the  $p$ th approximation is a constant quantity. If the distribution law of heat emission is referred to the unit mass of the fissile material, it coincides for the thermal neutrons with the law of thermal neutron flux distribution. The problem of physical design in this case consists in a solution of the reactor equations for a given thermal neutron distribution  $\nu v_{\text{fiss}}(\theta) = \nu(r)$

Card 4/7

Some methods of ...

the core. This system is considered to be solved successively in the manner of the finite element method. The internal group and stippling with the condition that the boundary resistor with  $n_{\nu_m} = B = \text{const}$  in the outer boundary. The equations for the core read

$$\begin{aligned} D' \nabla^2 n_{\nu_0} - \sum_i^6 n_{\nu_i} - \nabla^2 \sum_i^6 n_{\nu_i} &= 0 \\ D'' \nabla^2 n_{\nu_1} - \sum_i^6 n_{\nu_i} + \sum_i^6 n_{\nu_{i+1}} - \nabla^2 \sum_i^6 n_{\nu_i} &= 0 \end{aligned} \quad (1)$$

and for the reflector

$$\begin{aligned} D''' \nabla^2 n_{\nu_2} - \sum_i^6 n_{\nu_i} &= 0 \\ D'''' \nabla^2 n_{\nu_3} - \sum_i^6 n_{\nu_i} + \sum_i^6 n_{\nu_{i+1}} &= 0 \end{aligned}$$

With the boundary conditions

Card 5/7

REF ID: A647641 / 003/010

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Some methods of ...

$$\begin{aligned} n\psi_0 &= n\psi_0' \\ n\psi_{n1} &= n\psi_{n1}' \\ D^2\nabla_n n\psi_0 &= D^2\nabla_n n\psi_0' + \sqrt{\Lambda}nn\psi_0' \\ D^2\nabla_n n\psi_{n1} &= D^2\nabla_n n\psi_{n1}' - \Lambda n\psi_{n1}' \end{aligned}$$

one obtains as solution for the first equation

$$\begin{aligned} n\psi_0 &\approx B \frac{\sum_m}{\sum_1} \{ 1 + f(r) \}, \quad (19) \\ n\psi_{n1} &\approx B, \end{aligned}$$

and for the second

$$\begin{aligned} n\psi_0' &\approx B A'_1 \psi_1'(r) \\ n\psi_{n1}' &\approx B \{ A'_1 \psi_1(r) - A'_2 \psi_2(r) \}. \quad (20) \end{aligned}$$

Card 6/7

Some methods ...

8/069/61/011/001/003/610  
B102/B214

where  $f(\vec{r}) = \epsilon_1 f_1(\vec{r}) + \frac{1}{\epsilon_1 - 1} \psi(\vec{r})$  is the solution of the equation  $\nabla^2 \psi = \epsilon^2 \psi$ ,

$$f_1 = \left(1 - \frac{\epsilon^2}{L_0^2}\right) \sum_{n=1}^{\infty} \frac{c_n}{n^2} e^{i n \vec{k} \cdot \vec{r}}$$

There are 4 figures and 200 pages of text.

size A4, 2 pages, metric.

SUBMITTED: July 7, 1968

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Carlo 7/7

3/069/63/012/505/011/014  
B102/B104

24 ✓ J27  
AUTHORS: Ponomarev-Stepnoy, N. N., Glushkov, Ye. S.

TITLE: The problem of physical profiling of the heat release in heterogeneous power reactors

PERIODICAL: Atomnaya energiya, v. 12, no. 5, 1962, 41c-419

TEXT: Physical profiling of heat production in a homogeneous reactor has been considered in a previous paper (Atomnaya energiya, 11, no. 1, 19, 1961). A heterogeneous reactor is now considered and profiling is carried out in two-group approximation for a homogenized reactor working with

pure fissile material as fuel. With  $\bar{nv}_2 \cdot \frac{5}{c_2} F = 3 = \text{const}$  as the

profiling condition (demand for constant specific volume heat production) the two-group reactor equations

$$D_1 \bar{nv}_1 - \frac{1}{c_1} \bar{nv}_1 + v_5 - c_2 \bar{nv}_2 = 0; \quad (1)$$

$$D_2 \bar{nv}_2 + \frac{1}{c_1} \bar{nv}_1 - \frac{1}{c_2} \bar{nv}_2 - \frac{v_5}{c_2} \bar{nv}_2 = 0.$$

Card 1/3

The problem of physical profiling of ...

3/089/62/012/005/011/014  
B102/B104

can be written as

$$\left. \begin{aligned} D_1 \nabla^2 \bar{n}_1 + \Sigma_{c_1} \bar{n}_1 + \nu_s^2 / \delta D = 0 \\ D_2 \nabla^2 \bar{n}_2 + \Sigma_{c_2} \bar{n}_2 - f_6 B - Q \rho_{c_2}^2 \bar{n}_{c_2}^2 E = 0 \end{aligned} \right\} \quad (3).$$

$\sigma_c^2$  is the macroscopic absorption cross section for the fuel;  $\sigma_{c_2}^2$  is that for the remaining material;  $\rho_c$  is the nuclear fuel density in the lumps;  $\rho_m$  moderator nuclear density,  $f = V/V_l$ ,  $V_l$  = lump volume,  $V$  = cell volume;  $\beta = \bar{n}_2 / \bar{n}_1 = \text{const}$ ;  $B = \bar{n}_2^2 / \bar{n}_1^2 = \text{const}$ ;  $\bar{n}_1$ ,  $\bar{n}_2$  and  $\bar{n}_c$  are the mean neutron fluxes in cell, lump and moderator;  $\sigma_c$ ,  $\sigma_m$  and  $\sigma_c^2$  are the microscopic absorption cross sections for fuel, moderator and fuel diluent ( $\sigma_c^2 = C$ ).  $\bar{\nu}_s$  is the mean number of secondary neutrons per thermal neutron capture,  $D$  = neutron diffusion coefficient,  $\delta_{c_1}$  = macroscopic slowing-down cross section. The subscripts 1 and 2

Card 2/3

S/CGO/2/C12/305/111/234

B102/B134

The problem of finding profiles of ...

refer to ... an internal neutron. The unknown functions  $\bar{m}_1$ ,  $\bar{m}_2$ ,  $\bar{v}$ ,  
and  $\bar{v}'$  can be obtained if additional relations between them are known.  
In particular,  $\bar{m}_1$  may have to be determined from the relation  $\bar{m}_1 = \bar{v}'$ .  
 $\bar{v}'$  is a linear function of the radius in the core,  $\bar{m}_1 = \text{const}$ , by a result,  
or  $\bar{v}'$  is a known function of the coordinates. Such possibilities are  
discussed in detail.

SUBMITTED: April 27, 1961

Card 5/5

3/30/86/012/005/012/014  
3102/3104

26.2.2.1

AUTHORS: YUDOVICH, B. I., GLUSHKOV, V. V.

ABSTRACT: Solution of reactor equations with allowance for variable density along the reactor is proposed. The problem is solved in two-group approximation, assuming that the specific energy release is a given function of the coordinates. The reactor equations in plane

geometry

$$\left. \begin{aligned} \frac{d}{dx} \left( D_1 \frac{d}{dx} n v_1 \right) - \Sigma_1 n v_1 - S_0(x) &= 0; \\ \frac{d}{dx} \left( D_2 \frac{d}{dx} n v_2 \right) + \Sigma_1 n v_1 - \Sigma_{c_1}^s n v_1 - \Sigma_{c_2}^s n v_2 &= 0. \end{aligned} \right\} \quad (1)$$

with  $S_0(x) = \frac{D_1 D_2}{c_1 c_2} n v_1$  is a given coordinate function and

Card 1,3

Solution of the differential equation (3) is

$$\begin{aligned} & \frac{\partial^2 v_1}{\partial x^2} / \partial t^2 / \partial x^2 / \partial t^2 \\ & \partial^2 v_1 / \partial x^2 \end{aligned}$$

$$D_1 = \frac{D_1^0}{\beta(x)} + \Sigma_{i=1}^n \frac{\Sigma_i^0 \beta(x)}{\Sigma_{i=2}^n} + \Sigma_{i=2}^{n-1} \frac{\Sigma_i^{00} \beta(x)}{\Sigma_{i=2}^n}$$

can be rewritten as

$$\left. \begin{aligned} D_1^0 \frac{d^2 v_1}{d y^2} - \Sigma_1^0 n v_1 &= \frac{S_p(x)}{\beta(x)} ; \\ D_2^0 \frac{d^2 n v_1}{d y^2} + \Sigma_1^0 n v_1 - \Sigma_{i=2}^n n v_2 &= \frac{S_p(x)}{\Sigma_{i=2}^n \beta(x)} , \end{aligned} \right\}$$

$$dy = \beta(x) dx.$$

Since  $\beta(x)$  is a known coordinate function. Then the system (4) can be represented as  $dv/dy = L(x) = \omega(x)$ , with

$$L(x) = \omega(x)^2$$

Solutions of other equations from ...

5/30/91 62/622/13/04/542  
B102/2164

$$\Phi = \begin{pmatrix} u_1 \\ nv_1 \\ \frac{d}{dy} nv_1 \\ \frac{d}{dy} nv_2 \end{pmatrix}, \quad \hat{L} = \begin{pmatrix} 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \\ \frac{1}{\tau_0} & 0 & 0 & 0 \\ \frac{\Sigma_1^2}{D_1^2} & \frac{1}{I_3^2} & 0 & 0 \end{pmatrix}; \quad Q(x) = \begin{pmatrix} 0 \\ 0 \\ -\frac{S_1''(x)}{D_1^2 I_1^2(x)} \\ \frac{S_1(x)}{\sqrt{D_1^2 I_1^2(x)}} \end{pmatrix},$$

$$\frac{1}{\tau_0} = \frac{\Sigma_1^2}{D_1^2} + \frac{1}{I_3^2} = \frac{\Sigma_1^2}{D_1^2}$$

$\Phi$  and  $Q(x)$  are vectors,  $y = \int_0^x \beta(t)dt$ . The system (5) can be solved by usual procedure: First the homogeneous system  $\frac{d\Phi}{dy} = 0$  is solved and then a particular solution of (5) is sought. The general solution of (5) is then obtained as the sum of both.

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Caro 3/5

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CIA-RDP86-00513R000515420020-2

GARIN, V. P.; GORBATOV, N. A.; KUZMINOV, N. .

"The first stage of the development of the Soviet atomic bomb was a period of intense work."

Report submitted by the Int. Comm. on the History of Soviet Science and Technology.

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CIA-RDP86-00513R000515420020-2

GRISHKOV, N. V.; KUZNETSOV, N. V.

"...and it is necessary to take into account the fact that the document is distributed in the Soviet Union."

RECORDED AND INDEXED BY: [unclear] (SAC, [unclear], [unclear], [unclear])

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CIA-RDP86-00513R000515420020-2"

L 05647-67 EWT(m) JR

ACC NR: AP6021524

SOURCE CODE: UR/c089/66/020/006/0478/0482

AUTHOR: Glushkov, Ye. S.; Ponomarev-Stepnov, N. N.

51  
13

ORG: none

TITLE: Experimental study of modifying the energy release curve of reactors by re-distributing the fissionable material

SOURCE: Atomnaya energiya, v. 20, no. 6, 1966, 478-482

TOPIC TAGS: nuclear reactor power, nuclear reactor moderator, beryllium, enriched uranium, reactor neutron flux, multiplication factor

ABSTRACT: The authors report certain results of an experimental study of adjusting the distribution of energy release through the reactor by redistributing the fissionable material so as to optimize the reactor design. The experiments were carried out with critical assemblies in which the moderator was beryllium oxide and the fuel elements were teflon-4 foils containing 90% enriched uranium as a filler. The critical assemblies were rectangular in form. The fuel elements were arranged in horizontal layers and distributed over the height of the assembly. The total number of fuel elements in each layer was constant, and their distribution along one of the horizontal directions was varied. The reactor was made critical for each distribution of the fuel elements by changing the height of the assembly and its width, keeping its length and the thicknesses of the reflectors constant. The distribution of the thermal-neutron flux was measured for each assembly with the aid of indium foils. The experi-

UDC: 621.039.512.45

Card 1/2

L 05647-67

ACC NR: AP6021524

ments were made for four distribution profiles of the fissioning material (uniform, symmetrical with higher concentration in the center of the active zone, symmetrical with high concentration at the periphery, and asymmetrical). The space-energy distribution of the neutrons was calculated for each assembly in the diffusion many-group approximation (16 groups). The uranium concentration distribution was such that the heat release distribution per unit mass was uniform. The group calculations and the experimental results were in satisfactory agreement. Similarly, the values obtained for the effective multiplication factor obtained during the course of the calculations and in the experiment were in agreement. It is concluded that the distribution of energy release can be modified by varying the concentration of the fissioning material in real reactors, too. Orig. art. has: 3 figures and 2 tables.

SUB CODE: 18/ SUBM DATE: 26Oct65/ ORIG REF: 005/ OTH REF: 004

Card 2/2 Lg/k

ROZHKOVSkiY, D.A.; GLUSHKOV, Yu.I.; DZHAkUSHEVA, K.G.

Nebula Omega and its environs according to photographs obtained  
on the 50 cm. Maksutov telescope. Izv. Astrofiz. inst. AN Kazakh.  
SSR 14:19-33 '62. (NIEA 15:8)  
(Nebulae)

"APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515420020-2

RE: DIRECTIVE D.O. GLUSKOV, Yury I., KUCHAKOV, A.V.

Results of installing a segmented concave mirror in a high quality  
Makarov telescope. Inv. IN 740000. Date. Dec. 1966. Name. N. V.  
SOKOLOV. (MIRI 1740)

APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515420020-2"

DZHAKUSHEVA, K.G.; GLUSHKOV, Yu.I.; MIKHAYLOVA, N.V.; MGBHAYEVA, V.Ye.;  
ROZHKOVSkiY, D.A.

Study of the astroclimate of the Alma-Ata region. Trudy  
Astrofiz. inst. AN Kazakh.SSR 4:5-48 '63. (MIRA 16:11)

GLUSHKOV, Yu.I.

Polarization and rotational spectrum of KClO<sub>3</sub>. Tracy Astrophiz.  
inst. AN Kazakh. SSR 5,277,084 - 1951. (MIRA 18:6)

LOSEV, Izrail' Aleksandrovich; PUKHOV, Anatoliy Aleksandrovich; GLUSHKOV,  
Yu.M., nauchnyy red.; ZAVEL'SKAYA, V.M., red. izd-va; KONTOROVICH,  
A.I., tekhn. red.

[Electrical equipment of workboats and floating cranes] Elektrooborudovanie  
sudov i plavuchikh kranov tekhnicheskogo flota. Leningrad,  
Gos. soiuznoe izd-vo sudostroit. promyshl., 1961. 326 p.

(MIRA 14:8)

(Workboats--Electric equipment) (Floating cranes--Electric equipment)

NOVOKHATKA, D. A.; GLUSHKOVA, A. A.; CHETVERIKOVA, N. M.

Reaction of phenol with methylacetylene in the presence of boron  
fluoride compounds. Zhur. VKHO 7 no. 5:586 '62.  
(MIRA 15:10)

1. Lisichanskiy filial Gosudarstvennogo proyektnogo i nauchno-  
issledovatel'skogo instituta azotnoy promyshlennosti.

(Phenol) (Propyne)

L 21186-66 EWT(m)/EWP(j)/T RM  
ACC NR: AP6009708 (A)

SOURCE CODE: UR/0064/66/000/003/0015/0016

AUTHOR: Novokhatka, D. A.; Matyushenskiy, B. V.; Glushkova, A. A.; Seraya, V. I.

ORG: none

TITLE: Preparation of diphenylolpropane<sup>1</sup> from phenol and methylacetylene<sup>1</sup>

SOURCE: Khimicheskaya promyshlennost', no. 3, 1966, 15-16

TOPIC TAGS: bisphenol A, bisparahydroxyphenylpropane, diphenylolpropane, polycarbonate phenol, methylacetylene, boron trifluoride, manganese sulfate

ABSTRACT: A new preparative method has been developed for high purity 2,2-bis(4-hydroxyphenyl)propane (bisphenol-A), suitable for making polycarbonates.<sup>1</sup> The method is based on the alkylation of phenol with methylacetylene in the presence of boron trifluoride as catalyst. Preliminary study indicated that the yield of bisphenol-A depends on the phenol:methylacetylene molar ratio and on temperature, and that the reaction is promoted by salts of manganese, iron or bismuth taken in small amounts, i.e., 0.04%. Water inhibits the reaction. The optimum conditions are: temperature, 45-50°C; phenol:methylacetylene molar ratio, 12:1;  $\text{BF}_3$ , 2.5%;  $\text{MnSO}_4$ , 0.04% (both on the phenol). The catalyst can be recovered from the residual phenol in the form of a phenol complex. A flow diagram and description of the process are given in the original. The experiments conducted on a pilot plant indicated that the bisphenol-A yield is 89%, if 90% methylacetylene is used; the yield can be increased to 93-95%

Card 1/2

UDC: 547.631.4'211.07:542.973:546.273'161

L 21186-66

ACC NR: AP6009708

(on phenol reacted), if 99% methylacetylene is used. The cost per ton of bisphenol-A is calculated to be 8.2% lower than that produced by the hydrochloric acid method. [RE] Orig. art. has: 1 figure and 1 table.

SUB CODE: 07, 11/ SUBM DATE: none/ ORIG REF: 003/ ATD PRESS: *H222*

Card 2/2 BK

DOLIVO-DOBROVOL'SKIY, L.B.; GLUSHKOVA, A.I.; KUZYANINA, T.K.;  
EL'PINER, L.I.; YAKOVLEV, V.K.

Effect of biomycin and penicillin on the vital activity of  
some algae. Biul. MOIP. Otd. biol. 67 no.1:154-155 Ja-F '62.  
(ZERA 15:3)

(ALGAE)

(AUREOMYCIN)

(PENICILLIN)

*БИБЛИОГРАФИЯ*

AUTHORS: Shirovskiy, L. A., Rofanova, L. M., Blinova, L. S.

TITLE: A Method for the Growing of Alkali-Malide-Phosphorus for Ionization Counters (Методика выращивания фосфатно-алюминиевого кристалла для ионизационных счетчиков)

PERIODICAL: *Investigaya AM SSSR Seriya Fizicheskaya*, 1965, Vol. 12, No. 1, pp. 3 - 11 (USSR)

ABSTRACT: The method worked out here for the growing of a crystal is based on a modified method by Stokbarger. Crystallization is carried out from the melt in soldered cylindrical ampoules of quartz-glass. In this variant the difficulty connected with the loss of the activator no longer exists, at the same time, a complete isolation of the salt from atmospheric humidity is attained, thus the possibility of a chemical decomposition is excluded. The velocity with which the monocrystal is drawn is given by the displacement of the ampoule against the furnace. The furnace is a stepwise furnace and is divided into two sections by a ring wall. At the tip of the ampoule cone an induction coil which, in the further process, imparts the orientation to the entire crystal. It is necessary that in the crystallization zone, at the level of the ring wall or a height of 10 mm, the temperature distribution

Card 1/5

A Method for the Growing of Alkali-Malide-Phosphors for Semiconducting Devices

in the cross section has the shape of a paralleloid of revolution with the tip in the center of the rim, wall, or base plate. Thus the crystallization begins from a uniform center at the end of the quartz ampule and all admixtures not taken up by the crystal are displaced upward to the melt and to the walls of the vessel. The constancy of the temperature in the furnace is maintained by a controlling potentiometer by means of the connection of a series resistance. A platinum-platinum rhodium-thermocouple serves as transmitter for the potentiometer. The insertion of the transistors in the crystal must be unchanged during the entire process of growing. In the second chapter the activator distribution in the crystal phosphor is investigated. The concentration of the additions in the various parts of the monocrystal does not remain constant in all these cases in which in the growing of the crystal from the melt the compositions of the solid and the liquid phase with regard to the equilibrium conditions are not in agreement. Most frequently the distribution coefficient of the introduced and the accidental admixtures between these two phases is smaller than one. Additional factors are impressed upon the equilibrium of matter of the distribution of additions. These factors are dependent on the crystallization velocity and on the diffusion coefficient of the additions in the melt. It is known that the amplitude

Card 2/5

JL-14,10

A Method for the Growth of Al<sub>x</sub>Li<sub>1-x</sub>Clide-Phosphors for Scintillation Counters

The scintillation impulses of the even monochromatic  $\gamma$ -radiation increase with the increase in the activator-concentration in the crystal phosphor. The third chapter deals with the selection of the activator and its doping. It is shown that the less soluble compounds, in the case of an equal molar concentration of the activators, form a hundred times higher concentration of the centers of the additional absorption and luminescence in one unit of volume. It is shown that only part of the introduced additives play the part of an activator in the phosphors. If sufficiently pure salts are used, quite transparent noncrystalline can be obtained with a Tl<sub>2</sub>O-activator and the process of growth becomes considerably simpler. The last chapter treats the annealing of the crystal phosphors. As the alkali-halide-crystal has a very low thermal conductivity, deformation-forces causing a cubic structure form during a too rapid cooling. The annealing liquifies this mosaic structure. The noncrystalline melt withstands at high temperature and must then be slowly cooled. It follows that at high temperatures, even though the drift step coefficient of the addition in the crystal lattice becomes larger, the limit

Card 3/5

40-1-1/30

A Method for the Growing of Alkali-Halide-Phosphors for Scintillation Counters.

treatment nevertheless, as the test shot, has not had it. A variation in the composition of the crystal phos. I. In the author's opinion, the most important cause of the decrease in the light-response of the luminescence in polyhedral crystals is the following: the luminescence of the crystal phosphors is the result of the recombination of the electrons with the holes at the contact-surfaces formed by the activator. The luminescence light or that part of the electrons and holes that reach these surfaces in their motion from the place where they form. A recombination of these contact-surfaces, however, is realized at ordinary temperatures without a radiation. But other inner surfaces not connected with the activator may also occur in the crystal. These are effective traps for the electrons and holes and diminish the emission of light in the scintillation. Good illumination proves the structure of the crystals. There are 12 different references, 5 of which are Slavic.

Card 4/5

A Method for the Growing of Alkali-Halide-Phosphors for Crystallization Conditions

ASSOCIATION: All-Union Institute for Mineral Raw Materials  
(Vsesoyuznyj institut mineral'noj promst')

AVAILABLE: Library of Congress

1. Crystals 2. Single crystals-Growth

Card 5/5

L 31354-65 EWT(1)/I/EEC(b)-2 IJP(c)/AI/MDC/A8(mp)-2/ASD(a)-5/AFIL/SSD(a)/  
RAEM(c)/ESD(gc)/ESD(t)

ACCESSION NR: AR5000760

8/06/86/64/000/000/D047/D941

23

B

SOURCE: Ref. zh. Fizika, Abs 9D351

AUTHORS: Shamovskiy, L. M.; Glushkova, A. S.

TITLE: Growing of spectrometric scintillators

CITED SOURCE: Sb. Stsintillyatory\* i stsintillyats. materialy\*. Khar'kov, Khar'kovsk.  
un-t, 1963, 5-12

TOPIC TAGS: scintillator, spectrometry, crystal growth, fluorescence center

TRANSLATION: The authors assume that the fluorescence centers are produced in  
crystal phosphors as a result of localization of the activating impurities on the structural  
defects of the lattice. A new technology is proposed for growing NaI-Tl crystals,  
starting from this assumption and from the experimentally demonstrated independence of  
the yield of scintillations in a wide range of variation of the activator concentrations.

Card 1/2

L 31354-65

ACCESSION NR: AR5000760

The crystallization is carried out at a high temperature gradient, thus removing the danger of precipitation of the activator and of contaminating impurities in the form of a separate phase. To reduce the degree of "hydrolysis" of NaI, it is recommended to de-oxidize the melt with reducers whose oxidation products are volatile. It is proposed to exercise control over the annealing of the crystals by monitoring the change in the crystal excitation and glow spectra. T. Razumova.

SUB CODE: OP, SS

ENCL: 00

Card 2/2

BREGADZE, I.L.; KORNILOVA, N.F.; SERGEYEVA, A.P.; GLUSHKOVA, A.Ya.

Changes in the absorptive capacity of the peritoneum in exsan-  
guination. Khirurgia 36 no.2:82-86 P '60. (MIRA 13:12)  
(PEPTIC ULCER) (PERITONEUM)

BLEDNYKH, N.V.; GLUSHKOVA, G.V.; SPASSKAYA, A.S.

Changes in the lability of stimulated tissues due to the effect of  
vitamin B<sub>1</sub>. Trudy Kirov. otd. Vses. fiziol. ob-sha 1 no.1:42-51  
'60. (MIRA 14:8)

1. Fiziologicheskaya laboratoriya Kirovskogo gosudarstvennogo  
pedagogicheskogo instituta imeni V.I.Lenina.  
(THIAMINE)

GLUSHKOVA, I.S.; MIKHAYLOVSKIY, V.S.; FAYNZIL'BER, Ya.I.

Clinical aspects, diagnosis, and therapy of severe cerebrocranial  
injuries. Vop.neirokhir. 19 no.2:15-22 Mr-Ap '55. (MLRA 8:7)

1. Iz Instituta nevrokhirurgii Ministerstva zdravookhraneniya USSR.  
(HEAD, wounds and injuries,  
clin. aspects, diag. & ther.)  
(WOUNDS AND INJURIES,  
head, clin. aspects, diag. & ther.)

GLUSHKOVA, I.S.; KANYUKA, Yu.I.; KOPYAKOVSKIY, Yu.I.; KOROL', A.P.;  
LAPONOGOV, O.A.; YANOVSKIY, G.I.

Focal and general brain symptoms of supratentorial tumors of varying  
histostructure. Probl.neirokhir. 4:19-32 '59. (MIRA 13:11)  
(BRAIN--TUMORS)

GLUSHKOVA, I.S.; LAPONOGOV, O.A.

Meningoencephalitis with hydrocephalus appearing as a brain tumor.  
Zhur. nevr. i psikh. 61 no.4:517-521 '61. (VTRA 14:7)

1. Institut nevrokhirurgii (dir. - prof. A.I.Arutyunov) Ministerstva  
zdravookhraneniya USSR, Kiyev.  
(MENINGITIS) (ENCEPHALITIS) (HYDROCEPHALUS)

GLUSHKOVA, I.S.

Review of A.P. Burlutskii's book "Tumors of the thyroid  
gland". Vop. neirokhir. 27 no.2:63 Mr-Ap '63.  
(MIRA 17:2)

SOV/1700

PHASE I BOOK EXPLORATION

2A(7)

Lvov. Universitet

Materialy i Vsesoyuznogo soveshchaniya po spektroskopii, 1956.  
 2. Dni Akademika spektroskopii (Materials of the 10th All-Union Conference on Spectroscopy), 1956. Vol. 2: Atomic Spectroscopy;  
 Novyj Izd-vo Leningradskogo univ., 1958. 568 p. (Series: Ite:  
 Nauk. Izd-vo Leningradskogo univ.; vyp. 4(9)). 3,000 copies printed.

Additional Sponsoring Agency: Akademika nauch. SSR. Komissiya po  
 spektroskopii.

Editorial Board: O. J. Landberg, Academik. (Head, Ed.);  
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 (Deceased), Doctor of Physical and Mathematical Sciences; A.Ye.  
 Glauberman, Doctor of Physical and Mathematical Sciences;  
 M.I. S.I. Gaze, Tech. Ed.; T.V. Saranyuk.

Purpose: This book is intended for scientists and researchers in  
 the field of spectroscopy, as well as for technical personnel  
 using spectrum analysis in various industries.

CONTENTS: This volume contains 177 scientific and technical studies  
 on atomic spectroscopy presented at the 10th All-Union Conference  
 on Spectroscopy in 1956. The studies were carried out by  
 members of universities and technical institutes and include  
 extensive bibliographies of Soviet and other sources. The  
 studies cover all phases of spectroscopy: spectra of rare earths;  
 electron-magnetic methods for controlling  
 uranium production; physico-chemical dispersion in metal vapors; gases  
 optics and spectroscopy; the combustion theory; spectrum analysis of ores  
 spectroscopy and photographic methods for quantitative spectrum  
 analysis; mineral, plant, and alloy; spectral determination of the  
 hydrogen content of metals by means of isotopes; spectra and  
 analysis of spectral lines; spark spectrographic analysis; a  
 statistical survey of variation in the parameters of calibration  
 curves; determination of traces of metals; spectrum analysis in  
 metallurgy; photochemistry in metallurgy; and principles and  
 practice of spectrochemical analysis.

Card 2/31

Kirichenko, A.I. Spetral'nyi metod dlya determinatsii  
 seleniya i potasiiia v ogranichennykh tirkazitakh. Radzrashite, 477

Olinukova, L.A., M.A. Zaitsev, and A.M. Shavrin. Experimental  
 study of the relationship between the relative intensity of the  
 Vanadium, Chromium, and Nickel spectra. Lines and the  
 concentration in the standard samples. 483

Guttinge, R.I. and G.N. Dergacheva. Spectrum Analysis of Pure  
 Metal Alloys. 487

Terko, V.P., and N.I. Pugayeva. Spectrographical Determination  
 of Iron, Aluminum, Calcium, Magnesium, Copper, and Nickel in  
 Metal Alloys of High Purity. 490

Tetianko, Ye. V., and N.I. Dergacheva. Spectrum Analysis of  
 Cerium for the Determination of Actinide. 491

Card 27/31

MATIS, E.G., entomolog; GLUSHKOVA, L.A., fitopatolog

Bean pests and diseases in Kustanay Province. Zashch. rast.  
ot vred. i bol. 7 no.2:17 F '62. (MIRA 15:12)

1. Kustanayskaya opytnaya stantsiya, Karabalykskiy rayon,  
Kustanayskaya oblast'.  
(Kustanay Province—Beans—Diseases and pests)

*GLUSHKOVA, L. F.*

5/27/60/034/008/307/014

B015/B034

Authors:  
 Shchepetova, M. I., Belanovskaya, S. A., Sel'skikh, G. I.,  
 Shabot, N. V., Chikaturov, L. P., and  
 Matyushova, M. I. (editors)

Investigation of Pressure and Density of the Vapor of  
 Compounds Containing Organosilicon Compounds. I. The System

Silane - Methyl-dichlorosilane - Methyl-phosphine

Dihalosilanes

Journal Tekhnika Khimii, 1960, Vol. 14, No. 8,

pp. 736-740

TYPE: The authors determined pressure and density of the vapor of a mixture of balanced methyl dichlorosilane and methyl silane in a glass bulb connected with a water trap or vessel, dissolved in benzene and easily broken with water vapor or steam, dissolved in benzene and easily polymerize. In the present paper they report on the vapor density of methyl-dichlorosilane, methyl-phosphine, silane, benzene - methyl-dichlorosilane, methyl-dichlorosilane - methyl-phosphine experimental arrangements (Fig. 1) described in Ref. 1, based on the

experimental arrangements (Fig. 1) described in Ref. 1.

CARD 1/3

principle of hydrogen weighing, and its thoroughly explained. The apparatus includes a quartz balance with a balance beam and a glass bulb connected in a thermostatic bath which is placed in the thermostat. A balloon made of vulcanized rubber is suspended by a connecting rod from the balance beam. A quartz bulb is suspended from the thermally insulated basket. Basket 200 g. A quartz bulb is suspended from the balance beam. The basket is suspended from the balance beam. Quartz crystal of the quartz bell is weighed on the weight of the basket. Before the balance, the quartz bell is weighed in the basket. The density can be determined from the ratio of the weights of the basket and basket of operation. The calculation of the densities of the latter are about 5% of the errors of measurements. In the dimensional determination, the pressure, and about 1% in the dimensional determination, the molecular weight of the liquid whose data was calculated by the molecular weight of benzene and methyl dichlorosilane. The experimental data of methyl dichlorosilane, methyl-phosphine, benzene, and methyl-dichlorosilane are given in Table 1. The results show that the reported repeated available samples, the products

CARD 2/3

found for the vapor was calculated, and given in Table 2 and 3. It is found that at 42°C. liquid the vapor composition of the solution is benzene - methyl-dichlorosilane - methyl-phosphine. The accuracy of the previously obtained data is the same. The data of the density of the benzene - methyl-dichlorosilane - methyl-phosphine solution, and a comparison of the literature data are given in Table 3. The results of the calculations are given in Table 4. The data of the density of the benzene - methyl-dichlorosilane - methyl-phosphine solution, and a comparison of the literature data are given in Table 5. The results of the calculations are given in Table 6. The data of the density of the benzene - methyl-dichlorosilane - methyl-phosphine solution, and a comparison of the literature data are given in Table 7. The results of the calculations are given in Table 8. The data of the density of the benzene - methyl-dichlorosilane - methyl-phosphine solution, and a comparison of the literature data are given in Table 9. The results of the calculations are given in Table 10.

ASSOCIATION,  
 Matyushova (Voronezh State University, Voronezh, Russia)

October 50, 1960

CARD 3/3

On the 2nd of the month, a meeting was held at the Hotel Atlantic, to consider the question of a new State. The meeting was opened by the Rev. Mr. C. H. Smith, who gave a brief sketch of the history of the movement, and the present condition of the cause. The meeting was then opened to the public, and a large number of persons were present. The meeting was adjourned.

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**CIA-RDP86-00513R000515420020-2"**

## Glaucoma Angle

App. A. *Adaptations*

152

method of measurement was adopted in a previous paper,<sup>1</sup> and the  
processes and results of the experiments will be described in detail.  
The measurements were made at temperatures ranging from 10° to 100° C.,  
and the results obtained on the temperature dependence of the entropy  
show that pressure and temperature of the system have a strong influence  
upon the entropy. The entropy of the system increases with increasing  
temperature, the increase being more rapid at higher temperatures. The  
results of the measurements show that the entropy of the system is  
constant at low temperatures, and decreases with increasing temperature  
at higher temperatures.

Gard 2, 6

	$\alpha$	$\beta$	$\gamma$	$\delta$	$\epsilon$	$\zeta$
1	1	1	1	1	1	1
2	1	1	1	1	1	1
3	1	1	1	1	1	1
4	1	1	1	1	1	1
5	1	1	1	1	1	1
6	1	1	1	1	1	1
7	1	1	1	1	1	1
8	1	1	1	1	1	1
9	1	1	1	1	1	1
10	1	1	1	1	1	1
11	1	1	1	1	1	1
12	1	1	1	1	1	1
13	1	1	1	1	1	1
14	1	1	1	1	1	1
15	1	1	1	1	1	1
16	1	1	1	1	1	1
17	1	1	1	1	1	1
18	1	1	1	1	1	1
19	1	1	1	1	1	1
20	1	1	1	1	1	1
21	1	1	1	1	1	1
22	1	1	1	1	1	1
23	1	1	1	1	1	1
24	1	1	1	1	1	1
25	1	1	1	1	1	1
26	1	1	1	1	1	1
27	1	1	1	1	1	1
28	1	1	1	1	1	1
29	1	1	1	1	1	1
30	1	1	1	1	1	1
31	1	1	1	1	1	1
32	1	1	1	1	1	1
33	1	1	1	1	1	1
34	1	1	1	1	1	1
35	1	1	1	1	1	1
36	1	1	1	1	1	1
37	1	1	1	1	1	1
38	1	1	1	1	1	1
39	1	1	1	1	1	1
40	1	1	1	1	1	1
41	1	1	1	1	1	1
42	1	1	1	1	1	1
43	1	1	1	1	1	1
44	1	1	1	1	1	1
45	1	1	1	1	1	1
46	1	1	1	1	1	1
47	1	1	1	1	1	1
48	1	1	1	1	1	1
49	1	1	1	1	1	1
50	1	1	1	1	1	1
51	1	1	1	1	1	1
52	1	1	1	1	1	1
53	1	1	1	1	1	1
54	1	1	1	1	1	1
55	1	1	1	1	1	1
56	1	1	1	1	1	1
57	1	1	1	1	1	1
58	1	1	1	1	1	1
59	1	1	1	1	1	1
60	1	1	1	1	1	1
61	1	1	1	1	1	1
62	1	1	1	1	1	1
63	1	1	1	1	1	1
64	1	1	1	1	1	1
65	1	1	1	1	1	1
66	1	1	1	1	1	1
67	1	1	1	1	1	1
68	1	1	1	1	1	1
69	1	1	1	1	1	1
70	1	1	1	1	1	1
71	1	1	1	1	1	1
72	1	1	1	1	1	1
73	1	1	1	1	1	1
74	1	1	1	1	1	1
75	1	1	1	1	1	1
76	1	1	1	1	1	1
77	1	1	1	1	1	1
78	1	1	1	1	1	1
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80	1	1	1	1	1	1
81	1	1	1	1	1	1
82	1	1	1	1	1	1
83	1	1	1	1	1	1
84	1	1	1	1	1	1
85	1	1	1	1	1	1
86	1	1	1	1	1	1
87	1	1	1	1	1	1
88	1	1	1	1	1	1
89	1	1	1	1	1	1
90	1	1	1	1	1	1
91	1	1	1	1	1	1
92	1	1	1	1	1	1
93	1	1	1	1	1	1
94	1	1	1	1	1	1
95	1	1	1	1	1	1
96	1	1	1	1	1	1
97	1	1	1	1	1	1
98	1	1	1	1	1	1
99	1	1	1	1	1	1
100	1	1	1	1	1	1

S/076/60/032/002/02  
BMS/3064

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APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515420020-2"

APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515420020-2"

BALAMUTOVA, E.A.; SHAKHPARONOV, M.I.; LEL'CHUK, S.L.; LOMOV, A.L.;  
MAL'KOVA, G.N.; MARTYNOVA, M.Ye.; GLUSHKOVA, L.F.

Vapor pressure and density in systems containing organo-silicon compounds. Part 2: The systems: methyl dichlorosilane - methyl trichlorosilane - methylphenyl dichlorosilane and methylphenyl dichlorosilane - methyl chlorophenyl dichlorosilane - methylphenyl dichlorophenyl dichlorosilane. Zhur.fiz.khim. 34 no.9: (MIRA 13:9) 1916-1919 S '60.

1. Moskove'skiy gosuda-stvennyy universitet im. M.V. Lomonosova.  
(Silane) (Systems (Chemistry)) (Vapor pressure)

RAPOPOV, Ye.A., inzh.; GLUSHKOVA, L.I., inzh.

Condenser discharge welding of contact brushes. Sver.  
proizv. no.5:35 My '64. (VIRA 18:11)

MDnGUN, G.Ye.; MALINOVSKIY, M.S.; GLUSKOVA, L.V.

Formation of heterocyclic compounds from amines and ethylene glycol.  
Ukr.khim.zhur. 28 no.7:852-854 '62. (MIRA 15:12)

1. L'vovskiy nasudarstvennyy universitet im.Iv.Franko.  
(Heterocyclic compounds) (Amines) (Ethylene glycol)

L 26342-66 EWP(j)/EWT(m) RM

ACC NR: AP6019324

SOURCE CODE: UR/0379/65/035/008/1481/1483

AUTHOR: Zemlyanskiy, N. I.; Glushkova, L. V.

ORG: L'vov State University (L'vovskiy gosudarstvennyy universitet)

TITLE: Synthesis of unsaturated esters of O,O-dialkyldithiophosphoric acids 7

SOURCE: Zhurnal obshchey khimii, v. 35, no. 8, 1965, 1481-1483

TOPIC TAGS: organic synthetic process; phosphate ester, brominated organic compound, insect control

ABSTRACT: With the view to developing substances effective in the control of agricultural pests, the synthesis of esters of O, O-dialkyldithiophosphoric acids with propargyl bromide or allyl bromide in an acetone solution, compounds  $(RO)_2P(=S)-SR'$  (I) were prepared with 90-95% yields. When the reaction was carried out in a benzene solution, the yields were 58-67%. The following compounds were obtained: I (R = Et, R' =  $CH_2-CH=CH_2$ ); I (R = iso-Pr, R' =  $CH_2-CH=CH_2$ ); I (R = n-Pr, R' =  $CH_2-CH=CH_2$ ); I (R = n-Bu, R' =  $CH_2-CH=CH_2$ ); I (R = Et, R' =  $CH_2-C=CH$ ); I (R = iso-Pr, R' =  $CH_2-C=CH$ ); I (R = n-Pr, R' =  $CH_2-C\equiv CH$ ); I (R = n-Bu, R' =  $CH_2-C\equiv CH$ ). They were liquids which could be distilled in vacuo without decomposition and were readily soluble in ether, acetone, benzene and petroleum ether, but practically insoluble in water.

Orig. art. has: 1 table. [JPRS]

SUB CODE: 07, 06 / SUBM DATE: 29Jul64 / ORIG REF: 003 / OTH REF: 001  
Card 1/1 UC UDC: 547.26.11830  
B

L 51427-65 EWT(u)/EPP(c)/EMP(j)/T/EWA(a)

PC-4/Pr-4 RPL JV/RM

UR/0206/85/000/008/0021/0021

ACCESSION NR: AP5015487

66.095.02

AUTHOR: Taranenko, A. S.; Glushkova, L. V.

TITLE: A method for producing N,N'-dinitroso-N,N'-diphenyl-n-phenylenediamine.  
Class 12, No. 170064

SOURCE: Byulleten' izobreteniy i tvarynykh znakov, no. 8, 1965, 21.

TOPIC TAGS: diamine, hydrochloric acid, acetone, sodium nitrite

ABSTRACT: This Author's Certificate introduces a method for producing N,N'-dinitroso-N,N'-diphenyl-n-phenylenediamine by treating N,N'-diphenyl-n-phenylenediamine with sodium nitrite in the presence of an acid. The quality of the product is improved by carrying out the process in the presence of hydrochloric acid and acetone.

ASSOCIATION: Nauchno-issledovatel'skiy institut khimikatoriiya polimernykh materialov (Scientific Research Institute of Chemicals for Polymer Materials)

SUBMITTED: 08Jun64

ENCL: 00

SMB CODE: OC, GC

Card 1/2

"APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515420020-2

L 51427-65

ACCESSION NR: AP5015487

NO REF Sov: 000

OTHER: 000

*me*  
Card 2/2

APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515420020-2"

I-06512-(7) EWT(m)/EWP(j) RM  
ACC NR: AP7000480

SOURCE CODE: UR/C079/66/036/006/1118/1121

AUTHOR: Zemlyanskiy, N. I.; Prib, O. A.; Glushkova, L. V.

20  
B

ORG: L'vov State University (L'vovskiy gosudarstvennyy universitet)

TITLE: Arylation of O,O-dialkyldithiophosphates 1

SOURCE: Zhurnal obshchey khimii, v. 36, no. 6, 1966, 1118-1121

TOPIC TAGS: benzene derivative, sulfonic acid, ester

ABSTRACT: The reaction of certain aryl esters of benzenesulfonic acid with potassium salts of O,O-dialkyldithiophosphoric acids was studied in an effort to expand the methods of producing O,O-dialkyl-S-aryldithiophosphates, promising pesticides with low toxicity for warm-blooded animals and man. Potassium O,O-dialkyldithiophosphates in acetone solution react readily with 2,4- and 2,6-dinitrophenyl esters of benzenesulfonic acid at room temperature, producing good yields of O,O-dialkyl-S-dinitrophenyl esters of dithiophosphoric acids. The potassium O,O-dialkyldithiophosphates do not react with phenyl and mononitro- and monochlorophenyl esters of p-chloro- and p-methylbenzenesulfonic acids even with prolonged heating. Orig. art. has: 1 table. [JPRS: 37,023]—

SUB CODE: 07 / SUBM DATE: 06Jul65 / ORIG REF: 004 / OTH REF: 003

Card 1/1 LS

UDC: 547.26'118

TANANAYEV, I.V.: GLUSHKOVA, M.A.; SEYFER, G.B.

Chemistry of lanthanum ferrocyanides and their application in ana-  
lytic chemistry. Khim.redk.elem. no.1:58-86 '54. (MLRA 8:3)

1. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakov  
AN SSSR.  
(Lanthanum ferrocyanide)

Glushkova, A. A.

CH  
G

Physicochemical analysis of systems bearing value in analytical chemistry. XCV. Study of reaction of formation of aluminum hydroxide by measurement of the apparent volumes of the precipitates. I. V. Tanasev and M. A.

USSR

Glushkova, Tsvet Komissii po Khim. Akad. Nauk SSSR, Izd. Khim. Nauk 5(8), 22-33 (1954); cf. C.A. 47, 9319; 48, 3012a.—The apparent vol. of the ppt. is used to study the pptn. of  $\text{Al}(\text{OH})_3$ . The vol. of ppt. is plotted against the ratio  $\text{OH}^-/\text{Al}$  in the original expt. Carbonate-free NaOH soln., and  $\text{Al}(\text{NO}_3)_3$  and  $\text{Al}_2(\text{SO}_4)_3$  solns. contg. no free acid were used. Into a 25-ml. graduated tube introduce the Al soln.,  $\text{H}_2\text{O}$ , and NaOH, in such amounts that after addn. of the NaOH the vol. is 25 ml. Stopper the tube and then invert approx. 200 times. After 1 hr. interval read the upper boundary of the ppt. In expts. with const. Al content (0.01-0.04M) pptn. of ppt. begins when the ratio  $\text{OH}^-/\text{Al}$  is approx. 3.4. The curve has a max. at  $\text{OH}^-/\text{Al} \approx 3$ . At  $\text{OH}^-/\text{Al} \approx 2.8$ , Al cannot be detected in soln. and the vol. of ppt. is much less than at  $\text{OH}^-/\text{Al} = 3$ . At  $\text{OH}^-/\text{Al}$  somewhat above 4, the ppt. dissolves completely. After 1 hr. the max. could be noticed clearly. After 24 hrs. the vol. of ppt. was const. After several hrs. at room temp. the ppts. which started out with  $\text{OH}^-/\text{Al} > 3$  became whiter but the others did not change. If 1-2 ml. concd. HCl is added to each tube and mixed, the ppts. formed with  $\text{OH}^-/\text{Al} < 3$  quickly dissolve b/c the others remain insol. for 24 hrs. In expts. where the sum of  $\text{Al}(\text{NO}_3)_3$  and NaOH concns. always equalled 0.1M, addn. of  $\text{Ni}(\text{NO}_3)_2$  (0.3 and 1M) before the NaOH does not change the general outline of the curve but pptn. begins earlier. With the system  $\text{Al}(\text{NO}_3)_3-\text{NH}_4\text{OH}-\text{H}_2\text{O}$  the vol. of the ppt. is a max. at  $\text{OH}^-/\text{Al} \approx 3$  but for

(cont'd.)

✓ THIANAE ✓

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creates sharply when more  $\text{NH}_4\text{OH}$  is added. When  $\text{NH}_4\text{NO}_3$  (0.1 and 0.3M) is added before  $\text{NH}_4\text{OH}$  this max. is displaced to the left immediately after pptn, but on standing restores the max. to  $\text{OH}:\text{Al} = 3$ . At  $\text{NH}_4\text{NO}_3 = 1.0\text{M}$  the max. is displaced slightly to the right and vol. of ppt. does not decrease so sharply when excess  $\text{NH}_4\text{OH}$  is added. Pptn occurs earlier than  $\text{OH}:\text{Al} = 2$ . With  $\text{Al}(\text{SO}_4)_2 = 0.01\text{M}$  and  $\text{NH}_4\text{OH}$  pptn begins approx. when it dissociates  $\text{Al}(\text{NO}_3)_3$ . Then 2 max. are observed, at  $\text{OH}:\text{Al} = 2$ , and at 3, with a min. between them. The min. develops more sharply as  $\text{NH}_4\text{OH}$  is added. With  $\text{NaClO}_4$ , there is only 1 max. at 2.5. For  $\text{Al}(\text{SO}_4)_2 = 0.02\text{M}$  and there is  $\text{NH}_4\text{OH}$ , the first max. remains the same but second max. is less sharp.  $(\text{NH}_4)_2\text{SO}_4$  is added to system  $\text{Al}(\text{NO}_3)_3\text{-NH}_4\text{OH}\text{-H}_2\text{O}$  with  $\text{Al}(\text{NO}_3)_3 = 0.04\text{M}$ . With no sulfate present, the ppt. is stable at  $\text{OH}:\text{Al} = 2$  and the vol. is larger. The max. is still at 3. With  $(\text{NH}_4)_2\text{SO}_4$  at 0.01M this max. is at 2.6-2.7 and is very weak. Second max., is displaced to the right. At  $(\text{NH}_4)_2\text{SO}_4 = 0.03\text{M}$  the first max. is at 2.5-2.7 and the second max. is more noticeable. At  $(\text{NH}_4)_2\text{SO}_4 = 0.3\text{M}$  the first max. is at 2.5 and the second max. disappears. In significant concn. of sulfate the max. vol. of ppt. is obtained at a point corresponding to a basic salt, 10  $\text{Al}(\text{OH})_4^-\text{Al}(\text{SO}_4)_2$ . No Al ions are detected in solution at  $\text{OH}:\text{Al} = 2.4$ .

Existence of secondary max. depends on many conditions. It is suggested that with a large excess of  $\text{Al}^{4+}$  the sult.  $\text{Al}(\text{OH})_4^-\text{Al}^{4+}$  and  $\text{Al}(\text{OH})_4^+$  are formed. With small excesses of  $\text{Al}^{4+}$  colloidal  $\text{Al}(\text{OH})_4$  is formed. Since even in the presence of excess cations,  $\text{Al}(\text{OH})_4$  is more zeta-stable than  $\text{OH}:\text{Al} = 2$ , this min. may be the primary minimum in the found. The intermediate stage would be a colloidal miscelle,  $[\text{Al}(\text{OH})_4]_x[\text{Al}(\text{OH})_4]_y[\text{Al}^{4+}]_z[\text{Cl}^-]$ , for  $\text{NaOH}$  or  $\text{NH}_4\text{OH}$  systems.  $\text{Al}(\text{OH})_4^+$  and  $\text{Al}(\text{OH})_4$  are very poor precip. of Al for the solns. of  $\text{Al}^{3+}$  as  $\text{Al}(\text{OH})_4$  forms labile complexes for addition of  $\text{NaCl}$ , even excess of NaCl creates free hydroxyl ions. Add. of a little of  $\text{NaCl}$  after formation of the first max. is stopped.

TANANAYEV, I.V.; GLUSHKOVA, M.A.; SEYFER, G.B.

Ferrocyanide solubility series. Zhur.neorg.khim. 1 no.1:66-68 '56.  
(MLRA 9:10)

1.Institut obshchey i neorganicheskoy khimii imeni N.S.Kurnakova  
Akademii nauk SSSR.  
(Ferrocyanides)

CLASSIFICATION

AUTHOR: Tananaev, I.V., Seifer, G.B., and Glushkova, M.A. 560

TITLE: Ferrocyanides of Trivalent Iron (G Ferrotsianidakh Trekhvalent-novo Zheleza.)

PERIODICAL: "Zhurnal Neorganicheskoy Khimii" (Journal of Inorganic Chemistry, Vol.II, No.2, pp.268-280. (U.S.S.R.) 1951)

ABSTRACT: In this investigation the behaviour of the cyanides of trivalent iron in systems with lithium, sodium, potassium, rubidium and caesium has been studied by two methods: that of solubility and that of e.m.f. measurement. The equilibrium solutions obtained in the solubility experiments were used for the parallel study of the systems by the e.m.f. method using a platinum electrode with a saturated calomel electrode. From the results obtained conclusions are drawn on the general behaviour of trivalent iron ions in and ferrocyanides of different alkali metals when present together in systems. Differences due to the nature of the individual alkali metals were also noted. The tendency, to all the alkali metals was the formation of mixed ferrocyanides of iron although the nature of these compounds was very different for the different alkali metals. The stoichiometrically normal iron ferrocyanide  $\text{Fe}_4[\text{Fe}(\text{Cn})_6]_3$  is not formed with any of the systems studied. On incomplete precipitation of iron it either becomes adsorbed (systems with  $\text{Li}_4[\text{Fe}(\text{Cn})_6]$ , and  $\text{Na}_4[\text{Fe}(\text{Cn})_6]$ ), or remains

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## Ferrocyanides of Trivalent Iron (Cont.)

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in excess (systems with  $K_4[Fe(Cn)_6]_2$ ,  $Rb_4[Fe(Cn)_6]_2$ ,  $Cs_4[Fe(Cn)_6]_2$ ), an effect evidently due to coprecipitation of the alkali metal.

$M_4[Fe(Cn)_6]$  enters the precipitate as soon as the precipitation of iron is complete even with lithium and sodium. This is especially pronounced with rubidium and caesium. The contents of alkali metal in the precipitate increased according to the series K - Rb - Cs.

It appears that with potassium, rubidium and caesium mixed salts of the simplest type  $M_4[Fe(Cn)_6]$  are formed at first. It is very likely that the salts  $Rb_2Fe[Fe(Cn)_6]$  and  $Cs_2Fe[Fe(Cn)_6]$  do exist, but they react easily with  $M_4[Fe(Cn)_6]$  to form a second mixed salt of the composition  $M_6Fe_2[Fe(Cn)_6]$ .

Although the continued adsorption of  $M_4[Fe(Cn)_6]$  by the precipitate makes the interpretation of the experimental curves difficult the possibility of the formation of new incongruently soluble mixed salts of definite composition is not excluded.

As regards the strength of the bond in mixed ferrocyanides of iron and alkali metals, the latter can be arranged in the usual series with caesium having the greater strength and lithium the least. Apparently in the mixed salts the alkali metals can mutually replace each other according to the above order. From this point of view mixed ferrocyanides of trivalent iron can be considered as inorganic prototypes of ion-exchanging resins.

14 Figures and 2 Tables.

Card 2/2

AUTHOR: Tananaev, I.V. and Glushkova, M.A.

561

TITLE: Mixed Ferrocyanides of Thallium, I. Mixed Ferrocyanides of Thallium with Magnesium, Calcium and Strontium. (Oksmeshannykh Ferrotsianidakh Talliya, I. Smeshannye Ferrotsianidy talliya s Magniem, Kal'tsiem i Strontsiem).

PERIODICAL: "Zhurnal Neorganicheskoy Khimii" (Journal of Inorganic Chemistry, Vol.II, No.2, pp.281-286. (U.S.S.R.) [5])

ABSTRACT: With the object of embracing as large a number of possible types of compounds formed by ferrocyanides of thallium with the ferrocyanides of other metals, systems for investigation were chosen in such a way that the valency of the metals represented in them should be different. In the present communication results of the study of solubility in the systems  $TlNO_3 - E$ ,  $[Fe(CN)_6] - H_2O$  ( $E = Mg, Ca, Sr$ ) by the physico-chemical analysis method. It was found that mixed ferrocyanides of the type  $TlE[Fe(CN)_6]$  were formed, except with magnesium for which a second mixed salt of the composition  $Tl_{10}Mg_7[Fe(CN)_6]_6$  was isolated. The solubility of the mixed ferrocyanides of thallium and the alkali metals increased from magnesium to strontium being  $2 \times 10^{-3}$ ,  $3.4 \times 10^{-4}$  and  $3.6 \times 10^{-3}$  mol/litre at 20°C. Comparison of data from the literature on the composition of mixed ferrocyanides of alkali-earth and alkali metals and those obtained in the present investigation shows that the analogous thallium compounds we obtained closely

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Mixed Ferrocyanides of Thallium. I. Mixed Ferrocyanides of Thallium with Magnesium, Calcium and Strontium (Cont.)  
resemble them: this is indicated by the fact that they all belong to the single type  $M_2E [Fe(CN)_6]$ . As regards solubility in water, the compounds of thallium considered most closely resemble the corresponding rubidium and caesium compounds.

There are 7 references, one of them Russian.

There are 3 figures and 3 tables.

Received on 22nd October, 1956.

Card 2/2

Glushkova 1957

78-3-13/35

AUTHORS: Tananayev, I. V. and Glushkova, M. A.

TITLE: Mixed Ferrocyanides of Thallium. (O smeshannykh ferrotsianidakh talliya.) II. Mixed Ferrocyanides of Thallium with Copper and Nickel. (II. Smeshannyye ferrotsianidy talliya s med'yu i nikel'em.)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1957, Vol.II, Nr.3, pp. 586-593. (USSR)

ABSTRACT: This investigation had as its aim to fill the gap in the literature on the nature of the reaction of copper and nickel ions with ferrocyanide ions in the presence of thallium. The potential importance of such an investigation is that the information it provided will be used to decide whether thallium in very low concentration could be isolated from solutions containing certain non-ferrous metals. Ordinary methods of chemical analysis were used in this investigation to study systems consisting of  $Tl^+$ ,  $E^{2+}$  ( $E = Cu, Ni$ ) and  $[Fe(CN)_6]^{4-}$ . It is concluded that the slightly soluble mixed ferrocyanide of thallium and copper,

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78-3-13/35

**Mixed Ferrocyanides of Thallium. II.**

$Tl_2Cu_2[Fe(CN)_6]_2$ , is formed from the appropriate ions for the whole range of concentrations dealt with. The solubility of the compound formed as a result of the displacement of  $Cu^{2+}$  ions by  $Tl^+$  ions from a precipitate of  $Cu_2[Fe(CN)_6]$  was found to be so small that a suspension of this precipitate can be used to separate small quantities of thallium from solution. The mixed salt  $Tl_4Ni_4[Fe(CN)_6]_3$  was formed by the reaction of  $Tl^+$  with  $Ni^{2+}$  and  $[Fe(CN)_6]^{4-}$  ions. The solubility of the precipitate of this salt, formed by the reaction of  $Tl^+$  ions with a precipitate of nickel ferrocyanide is so low that it, too, can be used for separating small quantities of thallium from solution. There are 4 figures, 7 tables, and 6 references 2 of which are Slavic.

SUBMITTED: October 26, 1956.

AVAILABLE: Library of Congress.  
Card 2/2

78-3-14/35

AUTHORS: Tananayev, I. V. and Glushkova, M. A.

TITLE: Ferrocyanides of Thallium. (O Ferrotsianidakh talliya.) III. Mixed ferrocyanides of thallium with uranyl. (III. Smeshannye ferrotsianidy talliya s uranilom.)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1957, Vol.II, Nr.3,  
pp. 594-599. (USSR)

ABSTRACT: An account is given of the study of the solubility of the system  $TlNO_3 \cdot UO_2(NO_3)_2 \cdot Li_4[Fe(CN)_6] \cdot H_2O$  at 25°C. Solutions of these compounds were used, the molarity of the thallium nitrate solution being determined by precipitating thallium as chromate, that of lithium cyanide by titration of a known volume of the original solution by potassium manganate in sulphuric acid using crystal violet as an indicator. The concentration of the uranium salt was determined by precipitation of  $(UO_2)^{2+}$  in the presence of carbonate-free ammonium nitrate, the precipitate after washing and calcining being weighed as  $U_3O_8$ . No formation of

Card 1/2

78-3-14, 30

Ferrocyanides of Thallium. III.

the simple ferrocyanide of uranyl, the reaction of the ions leading to the formation of two mixed ferrocyanides of thallium and uranium with the compositions:  $Tl_2(UO_2)_3[Fe(CN)_6]_2$  and  $Tl_4(UO_2)_4[Fe(CN)_6]_3$ . All the alkaline metals and thallium can be arranged in the following series with respect to their ability to displace  $[UO_2]^{2+}$  ions from the precipitate of  $(UO_2)_2[Fe(CN)_6]$ : Tl is  $\gg$  Cs > Rb > K > Na > Li, from which it follows that suspensions of this precipitate can be used for separating small quantities of thallium from solution. There are 2 figures, 6 tables, and 5 references 2 of which are Slavic.

SUBMITTED: November 19, 1956.

AVAILABLE: Library of Congress.

Card 2/2

2/20/2001

TANANAYEV, I.V.; GLUSHKOVA, N.A.

Thallium ferrocyanides. Part 4: Mixed ferrocyanides of thallium  
with lanthanum and cerium. Zhur. neorg. khim. 2 10:2474-2482  
0 '57. (MIRA 11:3)  
(Thallium ferrocyanide) (Lanthanum) (Cerium)

SOV/78-4-7-33/44

5(2)  
AUTHOR:

Glushkova, M. A.

TITLE:

On the Reaction of the Formation of the Hydroxide of Trivalent Thallium (O reaktsii obrazovaniya gidrookisii trekhvalentnogo talliya)

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, vci 4, Nr 7,  
pp 1657-1660 (USSR)

ABSTRACT:

Whereas the system  $\text{Al}(\text{NO}_3)_3 - \text{NaOH} - \text{H}_2\text{O}$  and the corresponding systems of gallium and indium have already been investigated (Refs 1,2,3), only very few published data are available for thallium hydroxide, because most investigations (Refs 4-11) deal with  $\text{Tl}_2\text{O}_3$ . The present paper investigates the formation of thallium hydroxide in the system  $\text{TlCl}_3 - \text{NaOH} - \text{H}_2\text{O}$  by means of the method of the solubility and by measuring the apparent volume of precipitations. It follows from table 1 and figure 1 that the reaction between  $\text{TlCl}_3$  and  $\text{NaOH}$  is accompanied by the formation of practically pure  $\text{Tl}(\text{OH})_3$ . Only in the case of a considerable surplus of  $\text{TlCl}_3$  does the precipitate adsorb  $\text{Tl}^{3+}$ .

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SOV/78-4-7-33/46

On the Reaction of the Formation of the Hydroxide of Trivalent Thallium

ions or  $TlCl_3$ . Basic salts, such as occur in Al, Ga, In, do not form, so that Tl in this respect forms an exception. The apparent volume of the precipitates is given by table 2 and figure 2. In the case of an excess of  $TlCl_3$ , the precipitate is, however, compact (probably because of the adsorption mentioned), whereas it is loose at the stoichiometric point. In the case of an excess of alkali, no considerable variation of the volume of the precipitate occurs. There are 2 figures, 7 tables and 12 references, 4 of which are Soviet.

SUBMITTED: April 4, 1958

Card 2/2

88471

S/078/61/006/001/003/019  
B017/B054

5.2100

AUTHOR: Glushkova, M. A.

TITLE: Molybdonitrile Chloride

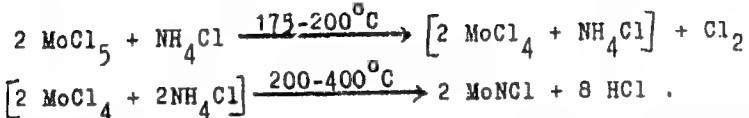
PERIODICAL: Zhurnal neorganicheskoy khimii, 1961, Vol. 6, No. 1,  
pp. 15 - 17

TEXT: The author reports on the synthesis of MoNCl from  $\text{MoCl}_5$  and  $\text{NH}_4\text{Cl}$ . A mixture of the two reagents (1 : 3) was heated in a crucible furnace in argon atmosphere. Black MoNCl powder was isolated as end product of the reaction of  $\text{MoCl}_5$  and  $\text{NH}_4\text{Cl}$  at 350 and 400°C. MoNCl is stable in air, not hydrolyzable by water, and insoluble in sulfuric acid. It is nearly insoluble in benzene, chloroform, and methyl alcohol. An analysis yielded the ratio of Mo : N : Cl = 1.03 : 1.02 : 1 at 400°C. The tetravalence of molybdenum in MoNCl was confirmed permanganatometrically. During the reaction, pentavalent molybdenum is transformed into tetravalent one, and MoNCl is formed according to the following equations:

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Molybdonitrile Chloride

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The amorphous character of MoNCl was established by X-ray analysis.  
Molybdenum nitride, MoN, is formed on heating MoNCl up to 900°C. Thus,

Mo<sup>4+</sup> shows a higher stability as compared with the nitrile chloride derivatives of P and Nb. I. V. Tananayev, G. B. Seyfer, and Ye. A. Ionova are mentioned. There are 1 figure, 2 tables, and 8 references: 3 Soviet, 4 German, and 1 British.

SUBMITTED: June 21, 1960

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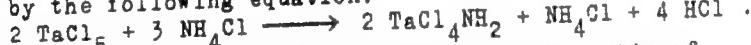
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AUTHORS: Glushkova, M. A., Yevteyeva, M. M.  
TITLE: Tantalum Analogue of Phosphonitrile Chloride  
PERIODICAL: Zhurnal neorganicheskoy khimii, 1961, Vol. 6, No. 1,  
pp. 18 - 20

TEXT: The authors studied the reaction between tantalum pentachloride and ammonium chloride. Tantalum pentachloride was produced by chlorination of metallic tantalum in a chlorine flow at 250 - 350°C by I. S. Morozov's method (Ref.11). Analyses of reaction products of  $TaCl_5$  with  $NH_4Cl$  yielded a ratio of Ta : N : Cl = 1 : 2 : 5. The nonreacted excess  $NH_4Cl$  was removed by sublimation. At 250°C,  $TaCl_5$  and  $NH_4Cl$  react with generation of HCl. At 350°C, HCl is fully driven out. The course of reaction at 250°C is expressed by the following equation:



The compound isolated at 350°C has a mean atomic ratio of

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Tantalum Analogue of Phosphonitrile Chloride S/073/61/006/001/004/019  
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Ta : N : Cl = 1 : 0.99 : 2.20. This ratio suggests the existence of  $TaNCl_2$ .  
A phase analysis confirmed the existence of this compound.  $TaNCl_2$  is a  
yellowish-green, air-resistant powder, insoluble in mineral acids with the  
exception of HF. By boiling with concentrated alkali hydroxide,  $TaNCl_2$   
decomposes with formation of tantalum hydroxide. In organic solvents,  
 $TaNCl_2$  is nearly insoluble; no decomposition occurs on heating to 500°C.  
There are 1 table and 12 references: 5 Soviet, 2 US, and 7 German.

SUBMITTED: June 22, 1960

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S/072/61/006/OC2/004/017  
B017/B054

AUTHORS: Glushkova, M. A., Petushkova, S. M.

TITLE: Ferrocyanides of Gadolinium

PERIODICAL: Zhurnal neorganicheskoy khimii, 1961, Vol. 6, No. 2,  
pp. 349 - 353

TEXT: The authors studied the reaction of the gadolinium ion with alkali ferrocyanides by solubility determinations, measurements of electrical conductivity, and analysis of the solid phases. Results of investigation of the system  $GdCl_3 - M_4[Fe(CN)_6] - H_2O$  ( $M = Li, Na, K, Rb, Cs$ ) are given

in Fig. 4. It was found that a simple gadolinium ferrocyanide of the composition  $Gd_4[Fe(CN)_6]_3$  was formed in the reaction of  $GdCl_3$  with  $Li_4[Fe(CN)_6]$ . The existence of this compound was confirmed by measurements of electrical conductivity and emf. The reaction of  $GdCl_3$  with  $Na_4[Fe(CN)_6]$  proceeds stepwise. First,  $Gd_4[Fe(CN)_6]_3$  is formed, and then  $NaGd_4[Fe(CN)_6]$ . Fig. 4

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Ferrocyanides of Gadolinium

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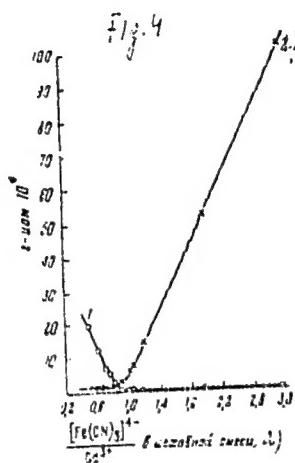
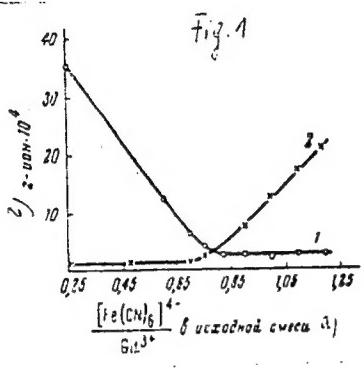
shows the interaction in the system  $\text{GdCl}_3 - \text{Na}_4[\text{Fe}(\text{CN})_6] - \text{E}_2\text{O}$ , and Fig. 5 the change in emf and the potential jumps. In the reaction of  $\text{GdCl}_3$  with the ferrocyanides of potassium, rubidium, and cesium, compounds of the type  $\text{MGd}[\text{Fe}(\text{CN})_6]$  ( $\text{M} = \text{K}, \text{Rb}, \text{Cs}$ ) are formed. The solubilities of  $\text{Gd}_4[\text{Fe}(\text{CN})_6]$ ,  $\text{NaGd}[\text{Fe}(\text{CN})_6]$ ,  $\text{KGd}[\text{Fe}(\text{CN})_6]$ ,  $\text{RbGd}[\text{Fe}(\text{CN})_6]$ , and  $\text{CsGd}[\text{Fe}(\text{CN})_6]$  in water at  $25^\circ\text{C}$  are:  $1.6 \cdot 10^{-4}$ ,  $6 \cdot 10^{-4}$ ,  $2.2 \cdot 10^{-4}$ ,  $1.2 \cdot 10^{-4}$ , and  $2.8 \cdot 10^{-5}$  mole/l. With the solubility determination of  $\text{CsGd}[\text{Fe}(\text{CN})_6]$ , gadolinium can be determined in pure solutions by the potentiometric method. The authors refer to corresponding investigations carried out at the laboratoriya khimii i analiza redkikh elementov Instituta obshchey i neorganicheskoy khimii AN SSSR im. N. S. Kurnakova (Laboratory of Chemistry and Analysis of Rare Elements of the Institute of General and Inorganic Chemistry imeni N. S. Kurnakov of the AS USSR), and mention I. V. Tananayev, M. A. Glushkova, G. B. Seyfer, and G. V. Shevchenko. There are 11 figures, 2 tables, and 8 references: 5 Soviet.

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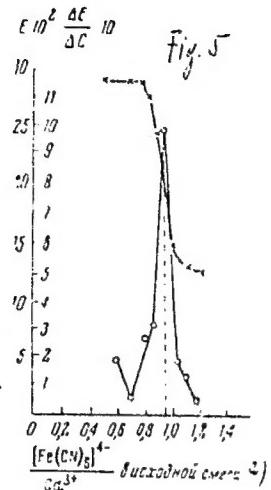
Ferrocyanides of Gadolinium

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Legend to Fig. 1: a) in initial mixture; b) g/ion· $10^4$ ; 1:  $Gd^{3+}$ ; 2:  
 $[Fe(CN)_6]^{4-}$ . Legend to Figs. 4, 5: a) in initial mixture; 1, 2 as in  
Fig. 1

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